

Title (en)
GRAIN-ORIENTED ELECTRICAL STEEL SHEET AND IRON CORE USING SAME

Title (de)
KORNIORIENTIERTES ELEKTROSTAHLBLECH UND EISENKERN DAMIT

Title (fr)
TÔLE D'ACIER ÉLECTRIQUE À GRAINS ORIENTÉS ET NOYAU DE FER METTANT EN OUVRE UNE TELLE TÔLE D'ACIER

Publication
EP 3919636 A4 20220323 (EN)

Application
EP 20748720 A 20200130

Priority
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• JP 2020003533 W 20200130

Abstract (en)
[origin: EP3919636A1] Provided are a grain-oriented electrical steel sheet having excellent iron loss property without using magnetic domain refining treatment and an iron core produced using the same. The steel sheet comprises: a predetermined chemical composition; and a steel microstructure in which: crystal grains are made up of coarse secondary recrystallized grains of 5.0 mm or more, fine grains of more than 2.0 mm and less than 5.0 mm contained at a frequency of 0.2 to 5 grains per cm², and very fine grains of 2.0 mm or less; for each coarse secondary recrystallized grain extending through the sheet in a thickness direction, an area ratio of a region in which projected surfaces of exposed areas of the coarse secondary recrystallized grain on a front side and a back side of the sheet coincide with each other to each of the exposed areas is 95 % or more.

IPC 8 full level
C21D 8/12 (2006.01); **C21D 6/00** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/16** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/34** (2006.01); **C22C 38/42** (2006.01); **C22C 38/48** (2006.01); **C22C 38/60** (2006.01); **H01F 1/147** (2006.01)

CPC (source: EP KR US)
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Citation (search report)
• [A] JP 4106815 B2 20080625
• [A] EP 0716151 A1 19960612 - KAWASAKI STEEL CO [JP]
• [A] WO 2018207873 A1 20181115 - JFE STEEL CORP [JP]
• [A] EP 0837149 A2 19980422 - KAWASAKI STEEL CO [JP]
• [A] EP 1273673 A1 20030108 - KAWASAKI STEEL CO [JP]
• [A] WO 2018117639 A1 20180628 - POSCO [KR]
• [A] JP H07268567 A 19951017 - NIPPON STEEL CORP
• See also references of WO 2020158893A1

Designated contracting state (EPC)
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